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A Theory of Bank Liquidity Requirements

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“A Theory of Bank Liquidity Requirements”

by Calomiris-Heider-Hoerova



**Discussion by
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Reserve Requirements

- Reserves for refinancing risk (Basel LCR)
 - Covers outflows for a period
 - Protects from temporary funding disruptions

- Credit risk: Capital
 - A buffer (absorbs losses)
 - Skin in the game (internalizes losses) → Incentives

- **Reserves for credit risk?**
 - Cash removes risk from portfolio → Incentives
 - Unlike capital, observable

Model

- $E + D = L + C$
- $Y * L + C - D > B * L$
- $B < Y \quad B > Y - 1$

- Cash and incentives:
 - Given **E** and **D**, investing in **C** reduces **L**
- Cash is negative debt:
 - Given **E** and **C**, less **D** reduces **L**

Model

- $E + D = L + C$
- $Y * L + C - D > B * L \rightarrow (Y-1) * L + E > B * L$
- Regulation:
 - $E / L > B - (Y - 1)$
 - $(C - D) / L > (B - Y)$
- **Net cash equivalent to equity**

Net Cash vs Reserve Reqts

□ Consider

- Two banks with same E and L
- C=1 D=5
- C=0 D=4

$$E + D = L + C$$

$$Y * L + C - D > B * L$$

$$(Y-1) * L + E > B * L$$

□ SAME:

- Slack in lending
- Effect of withdrawals
- Reaction to losses

□ **Gross cash? = Reserves, C**

- Adjusting debt is costly
- Debt fixed, cash more observable than L
- Acharya-Mehran-Thakor: "Scylla and Charybdis"
- Acharya-Almeida-Campello: "Is cash negative debt?"

Big idea: Reserves are Verifiable

- *Similar to capital,*
Cash reduces downside → improves incentives
- *Unlike capital,*
Cash is verifiable Can manipulate **E/L** not **C/L**
- **How to design a cash requirement?**
- Not sure **net cash** helps: $(C-D)/L > (B-Y)$
- **Gross cash requirements**
 - Still need equity to absorb losses
 - And need to limit debt to prevent borrowing to store cash
- **Model / Calibration**

Summary

- Net cash and equity *may be* equivalent
- Cash requirements can improve incentives
- Great, since re hard to manipulate!
- To design, need another theory